

SCANIA AB DIAGNOSTICS

by Kevin Atkinson



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OUR COMPANY

Scania AB is a major Swedish manufacturer, founded in 1911 and focusing on commercial vehicles, specifically heavy trucks and buses.





ABOUT THE PROJECT

Our goal is to minimize maintenance costs while simultaneously maximizing the safety and reliability of our vehicles.

OUR GOALS



FASTER REPAIRS

Avoiding inspection of functioning APS minimizes vehicle repair time.

MINIMIZE COSTS

Faster repair times result in lower operational costs.

MAXIMIZE RELIABILITY

Better detection of faulty APS maximizes vehicle reliability.

THE DATA

POSITIVE SAMPLES

Only 1,375 vehicles of the total sample have faulty APS requiring maintenance

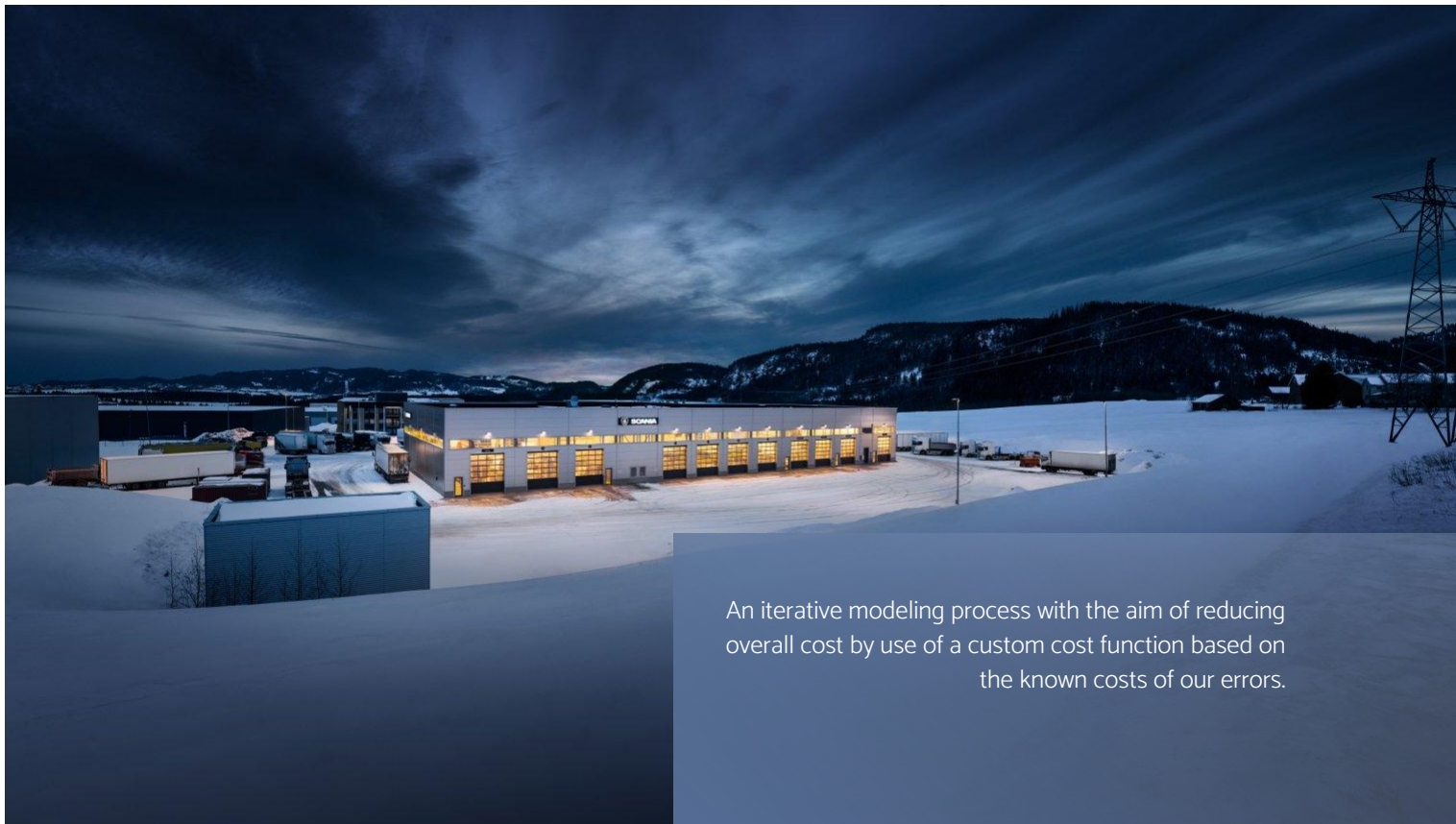
PROPRIETARY DATA

Data drawn from 107 unique sensors, with each being anonymized due to their proprietary nature.

TOTAL SAMPLES

Our data is drawn from sensor data from 76,000 vehicles undergoing repairs, totaling nearly 13,000,000 data points

THE PROCESS



An iterative modeling process with the aim of reducing overall cost by use of a custom cost function based on the known costs of our errors.

THE RESULTS



\$10.00

COST PER VEHICLE
WITHOUT OUR MODEL

\$0.87

COST PER VEHICLE
USING OUR MODEL

91%

AMOUNT SAVED PER VEHICLE

TOTAL SAMPLES

- 16,000 vehicles undergoing maintenance
- \$160,000 cost to check all vehicles
- \$13,950 APS maintenance cost with our model

WORKING TRUCKS MISDIAGNOSED (\$10 COST)

395

FAULTY TRUCKS MISDIAGNOSED (\$500 COST)

20

FAULTY TRUCKS IDENTIFIED

355

NEXT STEPS



FURTHER INCREASE RELIABILITY

There remains room for improvement regarding minimizing vehicle down time



DECREASE MAINTENANCE COSTS

Decreasing vehicle down time will serve to decrease overall maintenance costs

THANKS

Does anyone have any questions?
Follow the project updates

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